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$$T = 1890,\ \text{June}\ 2\,.\,37711\ \text{G. m. t.}$$

$$\left.\begin{aligned} \omega &= 69^\circ\ 54'\ 51''.1 \\ \Omega &= 320^\circ\ 33'\ 12''.4 \\ i &= 120^\circ\ 55'\ 57''.0 \end{aligned}\right\}\ \text{M. Equinox. 1890.0}$$

$$\log q = 0.276490$$

$$\text{O—C}: \Delta\lambda\,.\cos\beta = +\ 4''.6\ ;\ \Delta\beta = -\ 2''.7$$

$$\begin{aligned} x &= \overline{0.199962}\ \sin\ (182^\circ\ 50'\ 20''.6 + \text{v})\ \sec^2\ \tfrac{1}{2}\ \text{v} \\ y &= \overline{0.237990}\ \sin\ (289^\circ\ 28'\ 30''.2 + \text{v})\ \text{“}\quad\ \text{“} \\ z &= \overline{0.107627}\ \sin\ (\ 48^\circ\ \ 0'\ 36''.7 + \text{v})\ \text{“}\quad\ \text{“} \end{aligned}$$

The following positions were computed from these elements:

Gr. M. T.	α	δ	*Brightness.*
April 23.5 . .	316° 31′	24° 6′	1.87
May 13.5 . .	309° 57′	40° 50′	2.76
Perihelion . .	287° 16′	59° 44′	3.33
June 22.5 . .	235° 10′	65° 4′	2.86

The unit-brightness is the brightness at the time of the first observation (Harvard College, March 21). According to this ephemeris the comet will be brightest shortly after perihelion-passage. It will not, however, become visible to the naked eye. On March 21, its distance from the sun was 143 million miles and from the earth 248 million miles. At the time of perihelion the distances will be 194 million miles from the sun and 175 million miles from the earth. ARMIN O. LEUSCHNER.

LICK OBSERVATORY, 1890, April 7.

AWARD OF THE DONOHOE COMET MEDAL.

The comet medal has been awarded (for the first time) to Professor WILLIAM R. BROOKS, Director of the Observatory of Geneva, New York, for his discovery of a comet on March 19, 1890. This comet is the thirteenth discovered by Professor BROOKS.

TRANSLATIONS OF ARTICLES IN FOREIGN JOURNALS FOR THE *PUBLICATIONS A. S. P.*

Very frequently articles appear in foreign journals which ought to be available in the English language to our members. Members of the Society can render a great service by translating such articles for reprinting in our *Publications*; and they can, also, in this way, materially lighten the work of the Committee on Publication. May we then suggest to any member of the A. S. P. who is willing to undertake an occasional translation from German, French or Italian into English, that he communicate with either of the undersigned, and signify his willingness, and also say which languages he is most familiar with? The articles for reprinting will be selected by the Committee (and we shall be grateful for any suggestions in the matter), and the books containing them can usually be sent to the translators.

E. S. Holden, J. E. Keeler, C. G. Yale,
Committee on Publication.

ON THE CRITERION OF CONTINUITY OF FUNCTIONS OF A REAL VARIABLE AND ON THE THEOREM OF MEAN VALUE.

By Irving Stringham, Ph. D.

The following geometrical representation presents the criterion of continuity of a function of a real variable in an interesting form, and leads to a sort of generalized theorem of mean value expressing a relation between the *incremental* and *decremental* derivatives.

The Geometrical Representation.

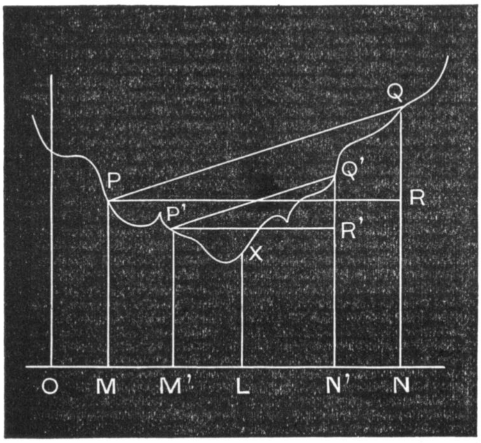

Figure 1.

Let X be a point of the curve represented by the equation $y = f(x)$. (Figure 1.) Draw two parallel chords, $P\,Q$ and $P'\,Q'$, the latter intercepting the curve at two points, P', Q', near X on either side, and suppose x to be a continuously increasing or decreasing variable within the interval $P\,Q$, assuming once only all real values between a and b, where

$$OM = a,$$
$$ON = b = a + h,$$

so that the abscissa of